1077-60-609   **Gregory F Lawler*** (`lawler@math.uchicago.edu`), Department of Mathematics, University of Chicago, 5734 University Ave., Chicago, IL 60637-1546. *Fractal properties of the Schramm-Loewner evolution.*

In his book Fractal Geometry of Nature, Benoit Mandelbrot observed that the outer boundary of random walks looked very similar to self-avoiding random walks. This was one of the first observations of a beautiful phenomenon that occurs in certain two-dimensional systems. The mathematical object in the continuum limit, which was discovered later, is now known as the Schramm-Loewner evolution (SLE). Many nontrivial facts about the fractal and multifractal behavior of these random curves can be proved. I will give a survey of these results. (Received September 08, 2011)